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Alaska Salmon Habitat

Managing a

World Class Resource

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Rise to the Future



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Mile 25.25 Spawning Channel on the Cordova Ranger District.

What's That? It's Habitat

(For Alaska's Salmon, of course)

If you know the National Forests in Alaska, you probably already know there are nearly 32,000 miles of streams and 189,000 acres of lakes in the Tongass and Chugach National Forests. And you might already know, too, that these streams and lakes produce a world class resource. A resource that yields an annual average commercial harvest of 162 million pounds of salmon, twenty percent of the statewide commercial salmon harvest, valued at over \$250 million. But, did you know that the Forest Service employs professional fisheries specialists to find new ways of improving the salmon habitat? We do. And as a result, we enhance diversity and productivity of salmon in the streams and lakes of Alaska's forests. We take our duty as custodians of the forests' natural resources seriously just as we know you take your fishing seriously.

Habitat protection and improvement are the two most important functions of the Forest Service's fish habitat management program. We work hard to protect all fish habitat from damage that might result from timber harvest, road construction, and mineral developments. We are working hard to protect, improve and conserve the habitat of our rich heritage of Alaska's wild salmon. Almost all our fish habitat improvement projects are completed in partnership with other organizations and agencies such as Alaska Department of Fish and Game, citizen groups and aquaculture associations. Since the 1950s, the Forest Service has invested over \$30 million to construct over 400 fish habitat improvement projects. This has resulted not only in increased salmon habitat but provides thousands of jobs and fish for people depending on this resource. It means a sense of satisfaction for us and for you an additional annual commercial harvest of 22 million pounds of salmon worth \$16 million annually.

Habitat Improvement Projects

Four examples of Forest Service fish habitat improvement projects are described below. They represent success for the benefit of all Alaskans, and many others!

1. Irish Creek Fish Ladder

The Irish Creek Fish Ladder is on the west coast of Kupreanof Island. In partnership with ADF&G, the ladder was constructed in 1983 on the falls just above tidewater. Stocking of Irish Creek with juvenile Coho Salmon began that same year and continued through 1986. Wild pink salmon, chum salmon, and steelhead colonized Irish Creek naturally after the fish ladder was operational. In 1991, coded wire tag returns from Irish Creek coho salmon indicated that 31,000 salmon valued at \$320,000 were harvested in the commercial fishery. There is substantial commercial harvest of the chum and pink salmon of Irish Creek, but the benefits are not quantified. It is expected that future harvests of coho will be similar to those in 1991. With what we invested in building the fish ladder and initial stocking of salmon, a return of 5 dollars for every 1 dollar spent will be realized (over the 25 year design life of the ladder) in the commercial fisheries.



Fertilizer being applied to Deer Lake, Sitka Ranger District.


2. Deer Lake Fertilization Project

Deer Lake is located on southwest Baranof Island. Deer Lake is barriered to salmon by a 300 foot waterfall on the outlet stream. In 1985, 1987, and annually thereafter, the lake was stocked with coho salmon fry; it has been fertilized annually since 1988 to boost fry survival and growth. The stocking and fertilization has been an ongoing cooperative project between the Forest Service and Northern Southeast Regional Aquaculture Association. In 1992, information from coded wire tag returns from coho salmon reared in Deer Lake indicates the project produced 139,620 adult coho salmon worth over \$1,000,000 in the commercial harvest. With continued stocking and fertilization, Deer Lake will continue to produce similar returns.

3. Old Franks Creek Fish Ladders

Old Franks Creek is located in Polk Inlet on the east side of Prince of Wales Island. In July 1992, the Forest Service built two fish ladders at the falls located on private land owned by Kavalco and Sealaska. Without the ladders, the falls prevent anadromous fish migration into the extensive spawning and rearing habitat in the Old Franks Lake system. Although coho and sockeye salmon were the target species for increased production, it is expected that steelhead, pink, and chum salmon production will also increase.

This project would have been impossible to complete without the excellent support and partnerships formed with the Alaska Department of Fish and Game; Fish America Foundation; Sealaska, Inc.; Kavalco, Inc.; Ketchikan Gateway Borough; City of Craig; and Southern Southeast Regional Aquaculture Association. These partners promoted the project through land leases, services of bioenhancement, and money for the purchase of materials. The project was completed at a cost of half a million dollars—\$465,000 contributed by the Forest Service, \$35,000 contributed by partners. In addition to the significant salmon production for subsistence use, there will be \$6.3 million worth of benefit over the expected 25 years of salmon production and resulting catches by those engaged in commercial fishing.



4. Mile 25.25 Spawning Channels

Two groundwater fed spawning channels are located near Mile 25 of the Copper River Highway. The channels were constructed in 1987 to increase the spawning area available for coho salmon. In cooperation with ADF&G, a five-year monitoring program was completed, using coded wire tags, to evaluate project success. Since 1990, this project has contributed from 8,000 to 20,000 adult coho salmon annually for the commercial harvest.



The Forest Service Fisheries Program protects, restores, and improves fish habitat within the Tongass and Chugach National Forests for benefit to Subsistence, Sport, and Commercial fish harvests. If you would like more detailed information regarding past or future projects, or would like to assist with the completion of a future project please contact any of the offices below:

Regional Office
P.O. Box 21628
Juneau, AK 99802-1628
(907) 586-8752

Chugach National Forest
3301 C St. Suite 300
Anchorage, AK 99503
(907) 271-2500

Chatham Area
Tongass National Forest
204 Siginaka Way
Sitka, AK 99835
(907)747-6671

Ketchikan Area
Tongass National Forest
648 Mission Street
Ketchikan, AK 99901
(907) 255-2642

Stikine Area
Tongass National Forest
P.O. Box 309
Petersburg, AK 99833
(907) 772-3841

*Cover photo: Sunny Creek Fishway, Ketchikan Area,
Tongass National Forest.*



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Fish Habitat Improvement Projects Completed During 1980 - 1990 Our Professionals and Your Dollars Hard at Work

Enhancement activity	Number of projects	Estimated production of fish (M lb/yr)	Estimated ex-vessel value (M \$/yr)	Cost	
				Federal (M \$)	Partners (M \$)
Structural fish passage	30	4516.5	2393.7	4389.3	290.0
Falls modification/ barrier removal	9	377.6	200.1	263.3	0.0
Spawning channels	6	330.2	175.0	369.5	82.0
Lake fertilization	9	5180.4	2745.6	1307.9	1687.0
Cooperative fish stocking	32	1726.7	352.6	737.7	1559.8
Ponds/off-channel rearing	7	16.3	8.6	86.6	0.0
Incubation boxes	3	9984.3	5291.7	295.8	236.7
Instream habitat enhancement	22	101.6	5387.1	692.5	30.0
Debris removal	10	76.0	40.3	19.0	0.0
TOTAL	128	22,309.6*	16,594.7*	8,161.6	3,885.7

*Represents annual benefits

Number of Potential Enhancement Projects by Type Opportunities for the Future

Project Type	Single Year	Multi-Year	Total
Instream habitat enhancement	13	2	15
Fish habitat/ basin rehabilitation	52	5	57
Structural fish passage	26	9	35
Falls modification	10	3	13
Spawning channels	1	1	2
Ponds/off-channel rearing	11	4	15
Barren lake stocking	0	3	3
Cooperative fish stocking	2	5	7
Incubation boxes	0	5	5
Lake fertilization	0	8	8
TOTAL	115	45	160

